

INTRODUCTION

Mission Statement

It is the mission of this strategic plan to prevent lead poisoning in Los Angeles County.

Planning to End Childhood Lead Poisoning

Lead Safe Los Angeles 2010 is a plan to eliminate childhood lead poisoning. It grew out of the recommendations of the Surgeon General of the United States in the report, *Healthy People 2010*.

In 2003, the Centers for Disease Control and Prevention (CDC) asked the recipients of its Childhood Lead Poisoning Prevention Grants nationwide to work with other public and community-based agencies develop plans to end lead poisoning by 2010. Putting an end to blood lead levels of 10 µg/dL or higher is Objective 8.11 of *Healthy People 2010*.¹

The plans are due on June 20, 2004. The CDC instructed grantees to create plans that set goals and objectives for the next six years and a work plan with implementation activities for 2004-2005.

There are two CDC grant recipients in California, the State Childhood Lead Poisoning Prevention Branch and the Los Angeles County Childhood Lead Poisoning Prevention Program (CLPPB). Both agencies are creating childhood lead poisoning elimination plans. The Los Angeles CLPPP began its plan process by identifying plan co-chairs and committee chairs and by inviting more than 100 hundred representatives of public and community-based agencies to attend a meeting on January 21, 2004.

There are four plan committees: Environment, Health, Housing and Other Sources.

The Plan Co-Chairs:

- Barbara Hairston, CDC Program Manager, Los Angeles County Department of Health Services, Childhood Lead Poisoning Prevention Program.
- Elena Popp, Attorney, Member of the Steering Committee of the Healthy Homes Collaborative and Legal Aid Foundation of Los Angeles.

The Committee Chairs:

- Environment Committee: Dr. Jon Ericson, Chair, Environmental Health, Science and Policy, School of Social Ecology, UC Irvine
- Health Committee: Martha Arguello, Director of Environmental Health,

Physicians for Social Responsibility.

- Housing Committee: Greg Spiegel, Staff Attorney, Western Center on Law and Poverty.
- Other Sources Committee: Heidi Arteche, PHN, SPA7, Whittier Health District.

A remarkable group of talented and forward thinking people from public, private and community-based agencies served on each committee bringing high levels of intelligence and skills to bear on the thorny problem of finding changes that would make a difference and have a good chance of being implemented.

Plan Process

Each committee met six times over a three-month period. Committee members reviewed background reports and exchanged information on how their various agencies carry out their tasks. Each committee drafted, reviewed and revised a set of goals, objectives and one-year implementation activities to be carried out between July 2004 and June 2005. The plan was then brought back to the committee as a whole on May 18, 2004 for approval. Most of the members of the committees agreed to continue meeting for the first year of implementation.

Childhood Lead Poisoning in Los Angeles County

Lead in gasoline and paint has been an environmental disaster in the United States. For much of the last century emissions from leaded gasoline polluted the air and contaminated the soil, while lead in residential paint made homes into a menace instead of a refuge.

Lead hazards were so ubiquitous in the United States that when the second National Health and Nutrition Examination Survey (NHANES), was conducted between 1976 and 1980, researchers found that 88.2 percent of children tested had blood lead levels above 10 micrograms per one tenth liter or deciliter of blood ($\mu\text{g}/\text{dL}$) and the average blood lead level was 14.9 $\mu\text{g}/\text{dL}$.²

Blood Lead Levels 1980-2000

By the early 1970s, years of public health campaigning against lead had begun to take effect. The Clean Air Act, as substantially amended in 1970, began a phase out of lead in gasoline not so much to protect children as to protect the catalytic converters to be installed in automobiles. Lead in paint was banned in 1978. By the next NHANES survey, conducted between 1988 and 1991, average blood lead levels were down to only 3.6 $\mu\text{g}/\text{dL}$ and levels above 10 $\mu\text{g}/\text{dL}$ were found in only 8.6 percent of children tested. The most current NHANES, (2000) found average lead levels are now 2.2 $\mu\text{g}/\text{dL}$ and only 2.2 percent of children tested have levels of 10 $\mu\text{g}/\text{dL}$ or higher.³

As children's average blood lead levels have plummeted, the level of lead in blood that researchers consider dangerous to children has also steeply declined. In the early 1960s a blood lead level of 60 $\mu\text{g}/\text{dL}$ was considered dangerous for children. That dropped to 30 $\mu\text{g}/\text{dL}$ in 1978.

By 1985 the Centers for Disease Control and Prevention (CDC) had set the level for intervention at 25 µg/dL and by 1991 it was 10 µg/dL. Research now indicates that significant brain damage to children probably occurs at very low levels of blood lead, below 10 µg/dL. There are no treatments to reverse this damage and many laboratories cannot even accurately detect very low levels of blood lead. The solution? Clearly primary prevention-- keeping lead out of children.

The federal government believes that the principal remaining threat of lead poisoning is in the thousands of tons of lead embedded in the painted walls and backyard soils of the nation's large stock of pre-1978 buildings. It is in these housing units where lead-based paint is most likely to be found and where deteriorated paint in dust and soil puts young children at risk of lead poisoning.

In addition, environmental research indicates that lead from past automobile emissions may still contaminate soil along freeway, highway and arterial corridors, creating another risk factor for children.⁴

As it turns out, deleading paint and gasoline doesn't entirely remove lead from our environment. Humans have found lead so useful over the years that it is still with us in our daily lives. Lead is used in making crystal glassware, in the glazes of imported pottery and tableware, and in manufacturing batteries. It is still found in a variety of imported cosmetics and home remedies and is even a common contaminant in imported Mexican candies that are widely consumed by children in Los Angeles.

Now, with national blood lead levels at an average of 2.2 µg/dL and only 2.2% of tested children with levels at or above 10 µg/dL, the problem has become one of finally eliminating childhood lead poisoning and the permanent damage it does to children and their families.

How Many Children in California Have Elevated Blood Lead?

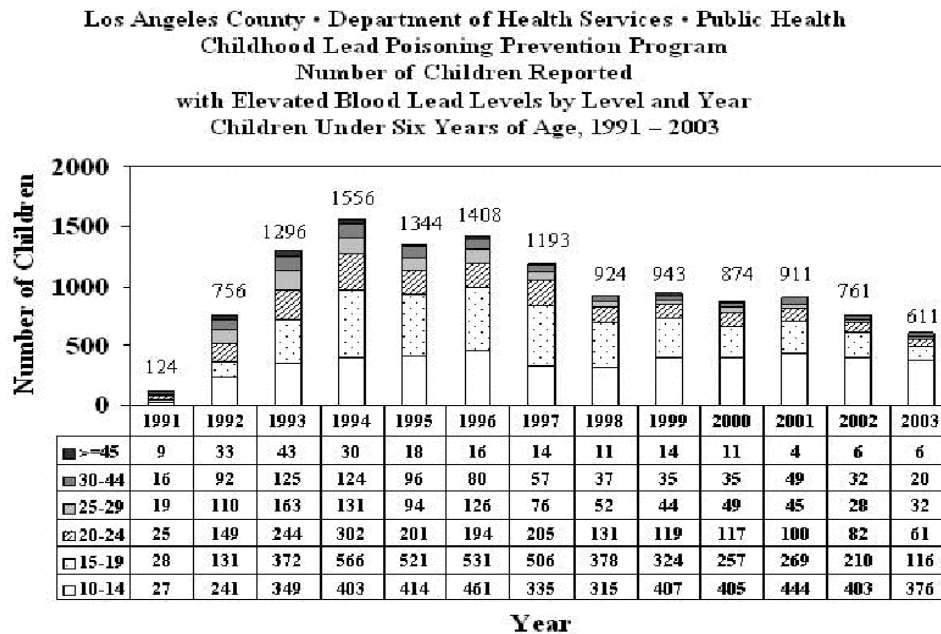
Unfortunately California does not yet have the data needed to measure the extent of lead poisoning in Los Angeles County. Reporting of all blood lead tests did not become mandatory until January 2003. The California Department of Health Services Childhood Lead Poisoning Prevention Branch (CLPPB) is in the process of entering and analyzing the 2003 data. According to CLPPB, results of 189,399 tests during the first six months of 2003 show 2,738 children with blood lead of 10 µg/dL or higher, a prevalence of 1.4 percent of total tests. The total number of reported tests in 2003 was 451,804, a 500 percent increase over the previous year.⁵

Los Angeles County Data

In Los Angeles County 13 years of testing have found 12,701 children with blood lead levels above 10 µg/dL, of which 5,077 were considered "cases" according to criteria established by the CDC.⁶ In total, the Los Angeles County Childhood Lead Poisoning Prevention Program received reports of 51,072 blood lead tests. But because reporting of all blood lead tests did not become mandatory until January 2003,⁷ this number does not reflect the number of tests actually performed.

Figure 1

Children with Elevated Blood Lead in Los Angeles County 1991-2003



Initial blood lead level ≥ 10 $\mu\text{g/dL}$; N=12,701.
Prepared by CLPPP Epidemiology Unit, 3/9/2004.

As shown in Figure 1, the number of children identified each year with blood lead levels of 10 $\mu\text{g/dL}$ or higher peaked at 1,556 in 1994. Since then there has been a steady decrease (with a few bounces) in the number of children with levels of 10 $\mu\text{g/dL}$ or higher and in 2003 there were only 611 children with levels at or higher than 10 $\mu\text{g/dL}$. The number of children identified as “cases” in Los Angeles County has also decreased. Cases peaked at 778 in 1994 and declined to only 139 new cases identified in 2003. However, many of these children remain in case management for years before their blood lead levels finally decline.

Requirements for Blood Lead Testing

In California, children insured by or receiving services from Medi-Cal or who receive services from the Childhood Health and Disability Prevention Program (CHDP)⁸ are considered at high risk for lead poisoning and must be given a blood lead test at ages one and two years, and, if not previously tested, up to age six. The tests can be performed either by a venous draw or a capillary draw but in either case the blood sample must be sent to a certified laboratory for analysis. For children not in these programs, providers should ask a series of questions to determine whether the child lives in a pre-1978 building with peeling or chipping paint or one that has been recently renovated. Furthermore, any child up to the age of six who has been put at risk of lead poisoning

should be tested.

One of the critical tasks in surveillance of childhood lead poisoning is to assess the efficacy of the blood lead screening program by determining the proportion of children in the applicable target groups who are actually tested each year. Data from the California Department of Health Services show that in Los Angeles County in July 2003, there were 157,000 children age 12 months to 36 months enrolled in Medi-Cal. These children plus an unknown number of uninsured children who receive CHDP well-child exams are considered at high risk for childhood lead poisoning and, according to federal and state mandates, should have received a blood lead test in 2003.

How Many Children are Screened for Blood Lead?

According to the CLPPB Strategic Plan, a pilot study conducted by Medi-Cal Managed Care plans in 2000 and 2001 found that in 2000, 32.7 percent of enrolled children received at least one blood lead test by age 27 months and in 2001, 43.1 percent had been tested by age 27 months.

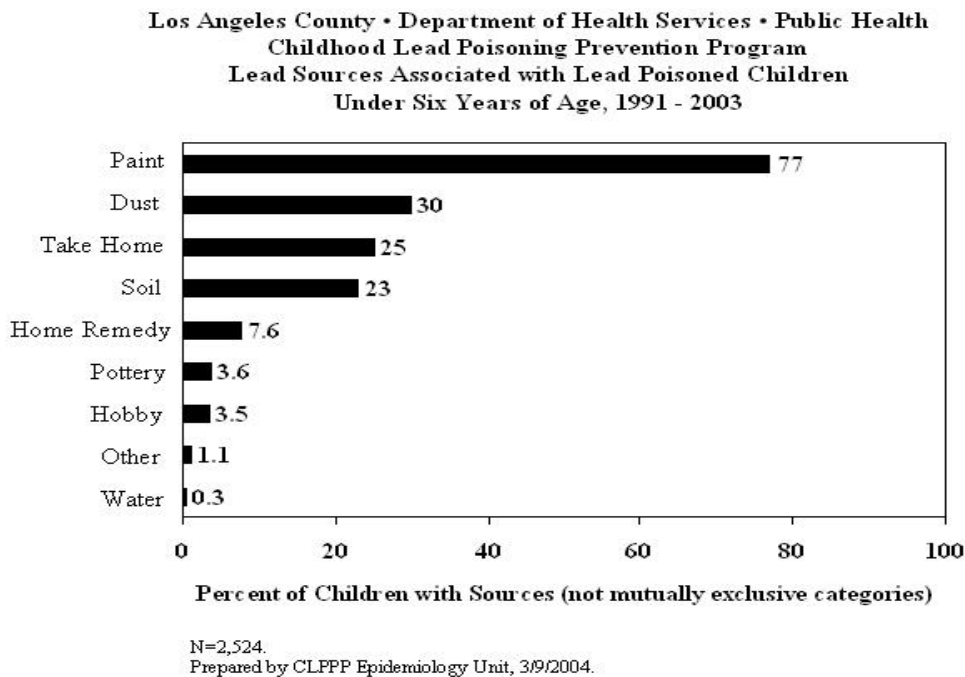
Although federal regulations require Medi-Cal Managed Care to report data on blood lead screening tests by age group, the regulation does not require reporting of the number of children tested, nor does it require public disclosure of data on screening rates by plan, provider and geography. A comparison of the number of tests reported on the Medi-Cal 416 form and the number of laboratory tests reported to CLPPB, shows that the Medi-Cal screening data is not accurate or complete.

The provision of accurate data on compliance with screening mandates by plan, provider and geography is essential. The data would allow State and local CLPPP strategic planners to set objectives for increasing blood lead screening and to work with the plans and providers who are underperforming to increase compliance.

Figure 2

Sources of Lead Poisoning

Figure 2 shows the sources of lead identified during environmental health investigations in the cases of 2,524 children between 1991 and 2003. In many cases multiple sources were identified.



While lead-based paint and dust were clearly the most important sources of lead, take home exposures were found in 25% of the cases. A take home exposure is an exposure to lead dust or particles brought into the house, car or another part of the child's environment from the parent's workplace. Common workplace exposures include construction (dry sanding and scraping), battery shops and other manufacturing processes using lead.

Focus of Lead Poisoning Prevention Programs

Until recently, the focus of childhood lead poisoning prevention programs has been largely on secondary prevention: the identification through blood lead screening of children with elevated blood lead levels and case management interventions through parent education and environmental management to lower these blood lead levels. Primary prevention relied principally on community health education campaigns and on the regulations and grant programs of the U.S. Department of Housing and Urban Development (HUD) Office of Healthy Homes and Lead Hazard Control and the federal Environmental Protection Agency (EPA). HUD and EPA developed regulations and training programs for certification of lead inspector/assessors, lead workers, monitors, supervisors, and project designers. HUD funds lead hazard control grants for in cities and counties across the nation and requires that all housing rehabilitation carried out with federal funds include inspections for lead-based paint remediation of lead-based paint hazards. Federal and in California, state law, also require that property owners disclose any known lead-

based paint hazards to buyers and renters. (Disclosure Rule).

California has developed a substantial infrastructure for controlling lead-based paint hazards. The California Department of Health Services (CDHS) accredits five types of lead training programs: inspector/assessor, project monitor, project supervisor, project designer and lead worker, and issues certifications to training program graduates who successfully pass certification exams. CDHS maintains a list of certified lead professionals on its website:

<http://www.dhs.ca.gov/childlead/html/materials.html>.

Regulations to protect construction, manufacturing and other workers from lead hazards on the job have been incorporated into California law and are enforced by California's Occupational Health and Safety Administration.

Primary Prevention

Although health education and blood lead testing are still important in the battle against lead poisoning, the possibility of irreversible neurological damage even at very low levels of blood lead⁹ means that primary prevention, keeping lead out of children, must be the key strategy in a plan to eliminate lead poisoning.

Since there are multiple sources of lead poisoning, prevention is a complex task. Because lead in household paint, soil and dust are regarded as the foremost causes of lead poisoning, control and/or elimination of lead paint hazards must be a crucial focus for prevention. Both HUD and CDC have developed strategies for eliminating lead poisoning that emphasize making housing lead-safe.

While removing all the lead-based paint and soil remaining in Los Angeles homes might be the ideal, controlling lead-based paint hazards by repairing deteriorating painted surfaces and maintaining intact paint film are now realizable goals due to a new California Law.

Senate Bill 460, now incorporated into the California Health and Safety Code at Section §17920.10 105251 to 105257 gives California a unique ability to substantially reduce lead hazards in all pre-1978 housing units.

The City of Los Angeles Systematic Housing Code Enforcement Program is working with both Los Angeles CLPPP and the Healthy Homes Collaborative on a pilot program to enforce lead-safe work practices. The Housing Committee's recommendations focus on ways to integrate enforcement of lead hazard identification and remediation and lead-safe work practices into the permitting and inspection procedures of building and safety departments countywide and into the proactive housing inspections performed by the District Housing inspectors of the Los Angeles County Division of Environmental Health.

Why Was There Lead in Paint?

Lead was long used as a pigment or coloring agent for paint. White lead (lead carbonate) was extensively used in white paint and as a base for other paint colors while lead chromate was used

to produce chrome yellow paint and red lead (trilead tetraoxide) was used to make a reddish brown paint that prevents rust on outdoor steel structures. White lead increased the paint's opacity and made the paint resistant to ultraviolet (UV) radiation. Although lead paint was identified as a cause of childhood lead poisoning in 1904 when it was banned for interior use in Belgium, France and Austria, U.S. paint manufacturers continued to use lead extensively in paint until 1955 when, in response to increasing evidence of the toxic effects of lead, paint companies voluntarily reduced lead in interior paint to 1%. Although Congress passed a Lead Paint Poisoning Prevention Act in 1971 and amended it in 1973 to rule that the U.S. Department of Housing and Urban Development (HUD) had to eliminate lead hazards in pre-1950s federally subsidized housing units, it wasn't until 1978 that the Consumer Product Safety Commission banned the use of paint containing 0.06% or more lead. Unfortunately, by that time, lead-based paint had been used in the majority of housing units in the United States.

How Many Units Have Lead-Based Paint?

While a 1990 survey conducted by HUD found lead-based paint in an estimated 64 million of the nation's 77 million pre-1980 housing units, by 2000, a new HUD study conducted by David E. Jacobs et.al. found that the number of housing units containing lead-based paint has steeply declined.¹⁰ According to data collected by the Jacobs study, between 34 and 37 million units or about 40% of all pre-1980 housing units in the U.S. have some lead-based paint and that about 25% or between 22 and 27 million units have significant lead-based paint hazards arising from deteriorated lead-based paint, dust or soil lead. Of these, deteriorated lead-based paint was found in nearly 15 million units.

The Jacobs study found that nationwide 1.2 million units (5%) with significant lead-based paint hazards were occupied by low-income families with children under age six. The children living in these units are at high risk for lead poisoning. Lead-based paint hazards were much more prevalent in housing built before 1960 (five to eight times more prevalent) and hazards were slightly more common in rental units (30%) than in owner-occupied units (23%).

What does this mean for Los Angeles County?

There are 3.2 million housing units in Los Angeles County of which about 2.6 million units were built before 1980. These units make up 81% of all housing units in the County. If the findings of the Jacobs study are correct, then about 40% of those units, or 1.04 million units contain lead-based paint and about 25% or 650,000 units are likely to have significant lead-based paint hazards. Of those 650,000 units, 5% or about 32,500 units are likely to be occupied by low-income families with children under age six.¹¹

Table 1
Lead-Based Paint in Los Angeles County Housing Units

Units	Approx. Number	Percent of all Units
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Total	3,200,000	100%
Pre-1980 units	2,600,000	81%
Estimated with lead-based paint	1,040,000	40%
Estimated with lead-based paint hazards	650,000	25%
Estimated with lead-based paint hazards and occupied by low-income families with children under age six	32,500	5%

Location of Lead-Based Paint in Housing Units

According to the HUD study, the interior building components most likely to be coated with lead-based paint are windows and doors. These components generate lead dust and paint chips through impact and friction as they are constantly opened and closed. Young children get this dust on their hands as they crawl and toddle around the house, then they put their hands in their mouths, ingesting the lead along with the dust. The same process happens in lead-contaminated soils outside the house. Sometimes children even eat the paint chips since lead has a rather sweet taste.

Preventing Lead Poisoning

Lead is a neurotoxin that not only causes irreversible neurological damage to young children but also crosses the placenta in pregnant women to damage the gestating fetus. According to recent research, lead can cause detectable reductions in IQ even at very low levels of blood lead. It is therefore essential to prevent lead poisoning by removing lead hazards from the environment.

What are Lead-based Paint Hazards?

Intact lead-based paint on interior or exterior walls and other non-moving building components is not considered a hazard. Lead-based paint becomes a hazard when it begins to peel or chip or when it is pulverized by the constant impact or friction of moving components such as doors and windows. The pulverized paint mixes with household dust that in turn gets onto the hands of crawling and toddling children. This age group (12 to 24 months) ingests leaded dust in frequent hand to mouth behavior.

Chipping and peeling exterior lead-based paint also gets into soil, especially at drip lines and subsequently gets onto children's hands in outdoor play. Contaminated soil is also tracked into the home where it mixes with indoor dust.

Lead hazards are also generated during normal building maintenance and repair when painters and maintenance personnel contaminate the entire housing unit with leaded dust by sawing, dry sanding, dry scraping or removing or demolishing building components coated with lead-based paint. It is therefore essential that any repair or renovation work in pre-1979 units be conducted using lead-safe work practices unless the building components that will be affected have been

tested according to HUD protocols¹² and found to be free of lead-based paint. HUD and EPA jointly developed the procedures for lead-safe work practices.

The best way to eliminate lead hazards is to replace the doors and windows that are the most frequent repository of interior lead-based paint. However, door and window replacement is expensive and is most likely to take place as buildings are gradually upgraded over time. The Jacobs study shows that the number of units containing lead-based paint is declining steadily. In the meanwhile, it is crucial to ensure that ongoing building maintenance does not generate lead hazards and that deteriorating paint is stabilized and maintained in good condition.

Senate Bill 460

Passed in 2002, California Senate Bill 460 (SB460) makes lead hazards such as deteriorated lead-based paint and lead contaminated dust and soil violations of health and safety codes and requires the use of lead-safe work practices in all repair work carried out in pre-1979 dwelling units. SB460 gives all jurisdictions in California the authority to enforce its provisions.

Before SB460 took effect in January 2003, very little could be done about lead hazards until children's blood lead levels reached 15 µg/dL or higher, the criterion for defining a "case." Once the child was considered a "case," CLPPP environmental health inspectors could conduct an investigation, identify hazards and order property owners to abate them. Now, lead hazards can be identified in both proactive and complaint driven code inspections and inspectors can order property owners to correct deteriorating paint and other lead hazards. Contractors and property owners must use lead-safe work practices in making repairs in any pre-1979 dwelling units and building, housing and health inspectors can issue stop-work and correction orders to property owners who do not comply. The City of Los Angeles Systematic Housing Code Enforcement Program is now enforcing SB460 in an extensive pilot program in collaboration with both the County Department of Health Services, Environmental Health and the Healthy Homes Collaborative.

Lead in Soil

According to data collected by Los Angeles County CLPPP, lead contaminated soil has been found in 23% of the 2,524 cases for which the CLPPP has environmental data. Soil on residential properties is often contaminated by deteriorated lead-based paint that is mixed into the top layer of soil, usually in very fine particles. Occasionally, the source of soil contamination could be a prior or adjacent use that involved lead or the storage or disposal of car batteries or other sources of lead contamination in the backyard.

An additional source of soil contamination is the residual of decades of leaded automobile exhaust deposited in the soils near roadways. According to many studies, high concentrations of lead have been deposited in soil along freeways, highways and major arterials. The lead was deposited there by auto emissions during the years that lead was an additive to gasoline. (Lead was banned from gasoline in 1986). To the extent that this contaminated soil is still found in residential property, public parks and schools located near highways and old main roads, children may be exposed to additional risks of lead poisoning.

A study conducted by Gregg Macey and published in Environmental Management in 2001¹³ provided the results of a geographic information system (GIS) analysis of sources of lead contamination in the southern and eastern areas of Los Angeles County. The study found a strong correlation between location near a freeway and elevated blood lead. Macey looked at a number of factors including soil samples, location of children with EBLs, and fixed source industrial lead emissions.

Despite the many studies demonstrating that the lead from decades of automobile exhaust may still contaminate soils along freeways, highways and major roadways, California does not have a source of comprehensive information on testing for and remediation of soil contamination by lead and other metals along transportation corridors.

In contrast, in 2003 the State of Washington established a task force on area wide soil contamination to consider what was known about the extent of arsenic and lead contamination of soil in Washington and to recommend how to better understand and address the problems.

Based on Macey's research, the Environment Committee of the Lead-Safe Los Angeles 2010 Plan decided to conduct an investigation to determine whether children living near freeways, old highways and arterials in a study area made up of areas of South and East Los Angeles County are exposed to additional risks from lead-contaminated soils. Environmental Health Specialists, volunteers from the Healthy Homes Collaborative and students will collect soil samples near freeways and arterials over the next six months to determine whether there is a pattern of soil lead contamination. The investigation is also examining the effects of chemicals in air pollution on exterior paint deterioration in housing located in transportation corridors.

The soil and air pollution data will be part of a GIS analysis that is being conducted to assess whether children face an elevated risk of lead poisoning from lead contamination of soil in residences, public parks and schools near freeways, highways and old main roads.

If children living in these transportation corridors face an elevated risk, the Committee recommends that the public be immediately notified and that major agencies begin planning for remediation.

Other Sources of Lead in Children's Environment

While lead-based paint and lead-contaminated soil are the principal sources of lead poisoning in young children, they are not the only sources of lead in children's environment. Lead can be found in the glazes on ceramics and tableware, in the paint on imported toys and crayons, and in home remedies and cosmetics. It is a common contaminant in Mexican candies and candy wrappers.

Why is there lead in pottery and tableware?

Lead is found in ceramic glazes for a number of reasons. Ceramic glazes are made of minerals and lead is an important component of a number of glaze colors. But, most important, lead is a flux that lowers the melting temperature for the silica that gives a shiny appearance to glazed

pottery. Ceramic glaze is actually melted glass and is made mostly of silica. However, since the melting point of silica is about 1704 Celsius and the melting point of clay is much lower, minerals known as fluxes have to be added to silica to lower the melting temperature. Common fluxes for silica include lead, potassium and lime or calcium oxide.

Ceramics are divided into categories according to the temperature at which they are fired. Earthenware is the term for pottery fired at the lowest temperature, between 700 and 1200 degrees Centigrade, stoneware is fired at about 1,200 degrees Celsius and porcelain is fired at about 1300 degrees Celsius. In order to withstand the higher heat, different types and mixtures of clay are used in the three types of ceramics. Much of the pottery imported from Mexico is earthenware. It is fired at low temperatures, often in wood-fired kilns (pottery ovens) and is usually coated with a glaze made with lead flux. This flux allows the production of an even, shiny, glazed finish in the backyard wood-fired kilns used by traditional potters.

Lead oxide is the most commonly used flux for low-fire ceramics. Its use is traditional for Mexican potters who still produce most of the pottery made in Mexico in small family-run potteries. Replacing traditional glaze with a product that is no more expensive and that performs equally well in low-fire kilns is the essential component of any program to delead traditional Mexican pottery. Mexican chemists have developed such a glaze and there are currently several projects under way in Mexico to convince potters to change techniques. The technical change is slow going. Convincing potters that the new technology is no more expensive, will produce the same product and that there is a vital market for the lead-free product is key to implementing change.

Lead is also found in both traditional and contemporary commercial tableware imported from China and other countries. There could be several reasons for this but the most likely is that lead is still being used to make the glaze colors.

How is lead in ceramics regulated?

Lead in ceramics and tableware in the U.S. is regulated by the federal Food and Drug Administration (FDA). The FDA sets standards for the amount of lead that can leach out of imported dishes subjected to an acidic bath for 24 hours. The permitted amount varies according to the type of tableware: flatware or plates, small hollowware or bowls, glasses, mugs, and large hollowware or pots and serving bowls.

The FDA sets standards in parts per million for lead in ceramics. These standards have also been adopted by California. "The standards below are based on the amount of lead that can leach out of tableware and potentially into food. If the amount is greater than that listed below, the tableware is considered potentially hazardous."¹⁴

Table 2

Federal Standards for Lead in Tableware

Type of Tableware	FDA/California Dept of Health Services Tableware exceeding these levels cannot be sold in the USA
Flatware (plates)	3.0 ppm
Small hollowware (bowls)	2.0 ppm
Large hollowware (serving dishes)	1.0 ppm
Cups or mugs	0.5 ppm
Large pitchers, jugs	0.5 ppm

California DHS Childhood Lead Poisoning Prevention Branch, Lead in Tableware

Information about lead-safe tableware

Environmental Defense, a national environmental nonprofit, maintains a website dated 1994 entitled “What You Should Know About Lead in China Dishes.” According to the website, the information, which includes advice for buyers and owners of china tableware and a list of lead-free or lead-safe china patterns, was produced by Environmental Defense in cooperation with the California Attorney General.

China website: http://www.environmentaldefense.org/documents/994_LeadChina4.htm
<http://www.environmentaldefense.org/article.cfm?contentid=>

At the website of the U.S. Food and Drug Administration Center for Food Safety and Applied Nutrition, there is a web page entitled “Ceramic Tableware from China” with information on a certification system for ceramic tableware production facilities in China that will provide FDA with reasonable assurance that ceramic ware produced in specified factories and exported to the USA will meet FDA action levels for leachable lead and cadmium.

Under the agreement a blue on white CCIB Sticker/Logo will be affixed to shipping and retail cartons of ceramic tableware imported into the US from CNCA-certified factories in China on or after January 1, 2000. FDA website: <http://vm.cfsan.fda.gov/~comm/ceramic.html>

Lead in consumer products is also regulated by California’s Proposition 65. All plates that leach more than .226 parts per million of lead and all hollowware that leaches more than 0.01 parts per million of lead are subject to the notification requirements of Proposition 65. That is, the product box or individual item must have a yellow triangle clearly affixed and the store must post a warning notice.

The warning notice for consumer products that contain a chemical known to the state to cause reproductive toxicity must be stated as follows:

“WARNING: this product contains a chemical known to the state of California to cause birth defects or other reproductive harm.”

Litigation is the only means by which Proposition 65's mandates are enforced; there are no provisions for ongoing monitoring of compliance with noticing requirements.



Tableware Findings

The Other Sources Committee purchased and tested imported pottery and tableware from a variety of vendors. Leach tests revealed that lead in the glaze of eight of 11 samples of Mexican pottery purchased in various locations exceeded the federal and state standards for lead in tableware. One bowl tested at 1,604 ppm. This pottery included bowls, cooking pots and mugs. Although the pottery was clearly marked for decorative use only, under the California Tableware Safety Act, this pottery may not be sold in California unless it has a hole in it to make it unusable for storing or cooking food.

Out of four samples of tableware purchased at a well-known national chain store, one set of dishes exceeded the federal standard for lead in tableware and all four sets of dishes exceeded the State's Proposition 65 guidelines.

Committee members noted that in the stores where they made purchases, the Proposition 65 warnings were not in compliance with the requirements of the law.

Lead in Candy

While lead is in ceramics because it is part of the production process, lead in candy is an accidental contaminant. According to a recent Orange County Register series on lead in candy made in Mexico, lead enters the candy manufacturing process as a contaminant of chile powder first in the soil in which chiles are grown, in the storage containers when the chiles are transported and from lead solder when they are milled. Candy stored in miniature ceramic pots is contaminated by glazes that are high in lead and paper wrapped candies are often contaminated by the inks used to die the paper and to print the labels. Legislation that would make the CLLPB responsible for regulating the lead content of imported candy was proposed but not passed in the 2004 session of the California legislature (AB2297).

The federal standard for lead in food is 0.5 ppm. CLPPP Environmental Health Specialists serving on the Other Sources Committee purchased spices and candies at various stores to test for lead. Out of 54 tested samples of spices and candy, one sample of Lucas lemon lime seasoning powder had a lead level of 9.78 mg/kg or ppm, many times higher than the allowed amount. Candy wrappers from Baby Lucas Sweet and Salty Mango, Muelas Acitito candy and Paleto 'n Corona Pink Purple wrappers had lead levels of 1.05 ppm, 1.06 ppm, and 1.17 ppm respectively, all levels that exceed the 0.5 ppm permitted by federal standards.

En

1. The Surgeon General defines lead poisoning as blood lead levels at or above 10 µg/dL and elimination of lead poisoning as elimination of blood lead levels at or above 10 µg/dL. Committee members were not able to agree on this definition; many members are concerned about recent research that found severe neurological damage at very low levels of blood lead.

2. Centers for Disease Control and Prevention website

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3. "Children's Blood Lead Levels in the United States," Centers for Disease Control and Prevention website <http://www.cdc.gov/nceh/lead/research/kidsBLL.htm#National%20surveys>
 4. Macey, Gregg P., Her, Xee, Reibling,, Ellen Thomas and Ericson, Jonathon, "An Investigation of Environmental Racism Claims: Testing Environmental Management Approaches with a Geographic Information System," *Environmental Management*, Volume 27:893-907, No. 6, 2001.
 5. "Draft California: Strategic Plan for Elimination of Childhood Lead Poisoning," May 24, 2004
 8. Medi-Cal is a federal and state-funded health insurance program for children and their families based on income (Medicaid). CHDP is a program that provides a periodic well-child medical exam and treatment for identified conditions to income eligible children. CHDP is California's version of the federal government's Early and Periodic Screening, Diagnosis and Treatment Program.
 9. Canfield, Richard L, Henderson, Charles R. Jr., Cory-Slechta, Deborah A., Cox, Christopher, Jusko, Todd A. and Lamphear, Bruce. P, "Intellectual Impairment in Children with Blood Lead concentrations below 10 µg per Decilitre," *New England Journal of Medicine*, Volume 348:1517-1526, No. 16, April 17, 2003.
 10. Jacobs, David et.al., "The Prevalence of Lead-Based Paint Hazards in U.S. Housing," *Environmental Health Perspectives*, Volume 110:A599-A606, No. 10, October 2002.
 11. There may be somewhat fewer units with lead hazards in Los Angeles County than calculated here because the national study found that while 36% of the housing in the North and Midwest had lead-based paint hazards, only 16% of the housing in the South and West had lead-based paint hazards.
 12. HUD protocols: <http://www.hud.gov/offices/lead/leadsaferule/index.cfm>
 13. Macey, op.cit.
 14. From California Department of Health Services Childhood Lead Poisoning Prevention Branch website Lead in Tableware Regulation.